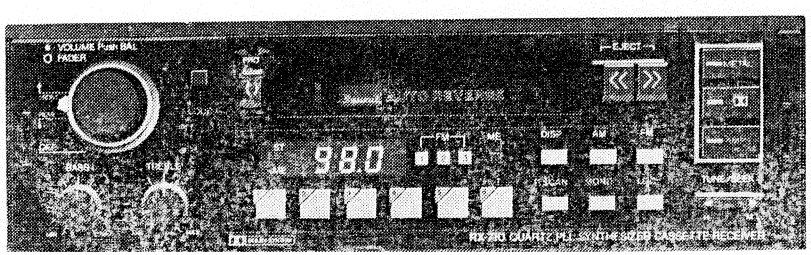
RX-710

OPERATING INSTRUCTIONS
MODE D'EMPLOI
MANUAL DE INSTRUCCIONES



Sansui

Thank you very much for having purchased this car stereo component by SANSUI. Before use take the time to read through these instructions carefully and familiarize yourself with the component's operation.

- **The Model No. and Serial No. of your unit are shown on its back and bottom panel.**
- **SANSUI attests that this product conforms with EEC directive 76/889.**

Nous vous remercions pour cet achat d'un système stéréo de voiture SANSUI. Avant de mettre l'appareil en service, lire attentivement ce mode d'emploi jusqu'au bout afin de vous familiariser avec le fonctionnement de l'appareil.

- **Le numéro du modèle et le numéro de série de l'appareil sont inscrits sur son panneau arrière et inférieur.**
- **La société SANSUI déclare que cet appareil est conforme aux prescriptions de la directive 76/889 CCE.**

Enhorabuena por la adquisición de este componente estereofónico para automóvil SANSUI. Antes de ponerlo en funcionamiento por primera vez, lea todas estas instrucciones y familiarícese con la operación del componente.

- **El N.O de modelo y el N.O de serie de este aparato están impresos en el panel posterior y inferior.**
- **SANSUI garantiza que este producto está conforme con las directrices de EEC 76/889.**

ENGLISH

Before Use 6
Mounting Procedure 6
Connections 9
Panel information 10
Synchronizing time 13
Broadcast reception 14
Tape playback 15
Maintenance and Precautions 16
Specifications 17

6 ~ 17

FRANÇAIS

Avant l'utilisation 18
Procédure de montage 18
Connexions 21
Indications sur le panneau 22
Synchronisation de l'horloge 25
Réception de la radio 26
Lecture de bande 27
Entretien et pécautions 28
Spécifications 29

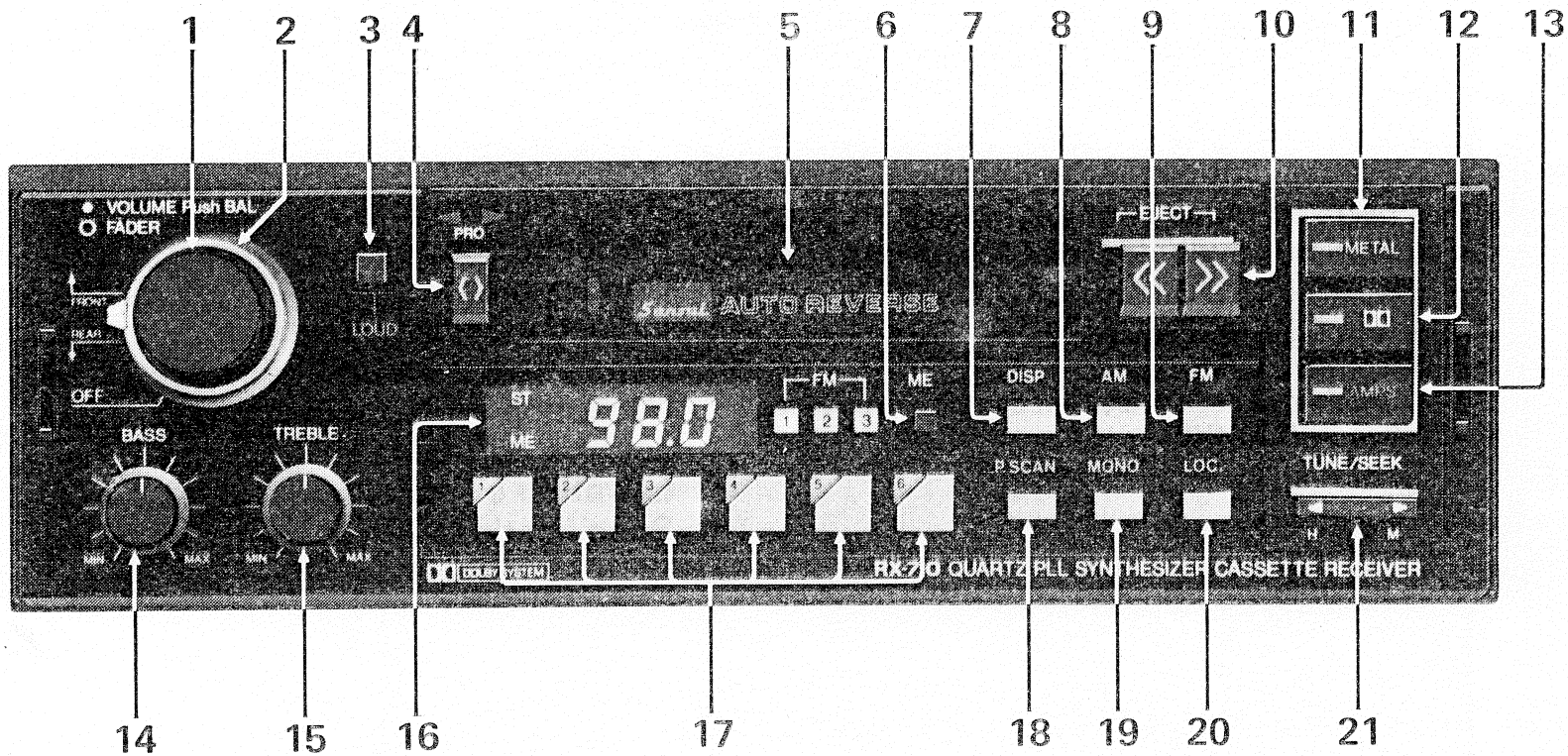
18 ~ 29

ESPAÑOL

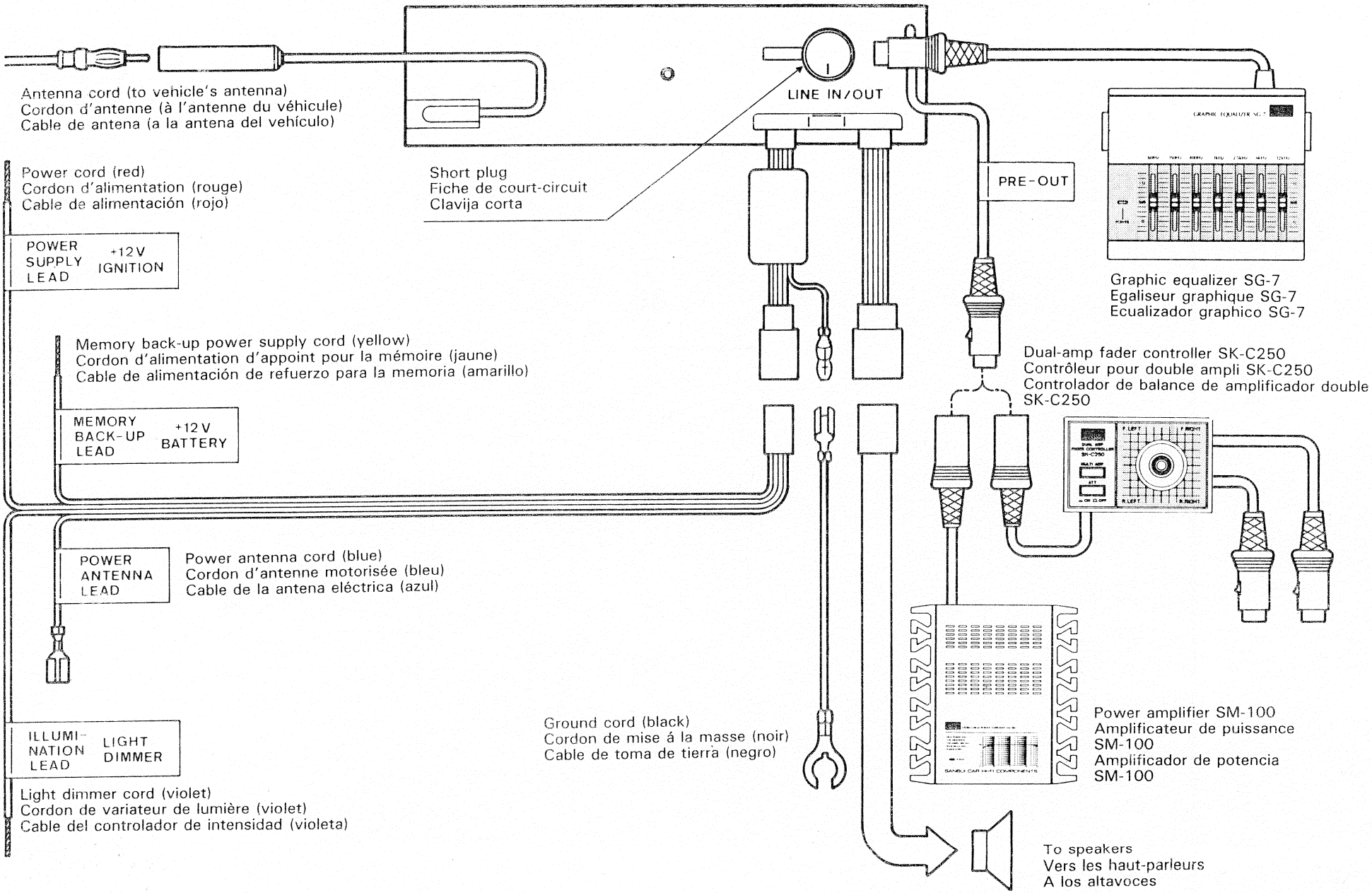
Antes de ponerlo en funcionamiento 30
Procedimientos de montaje 30
Conexiones 33
Información del panel 34
Puesta en hora 37
Radiorrecepción 38
Reproducción de cintas 39
Mantenimiento y precauciones 40
Especificaciones 41

39 ~ 41

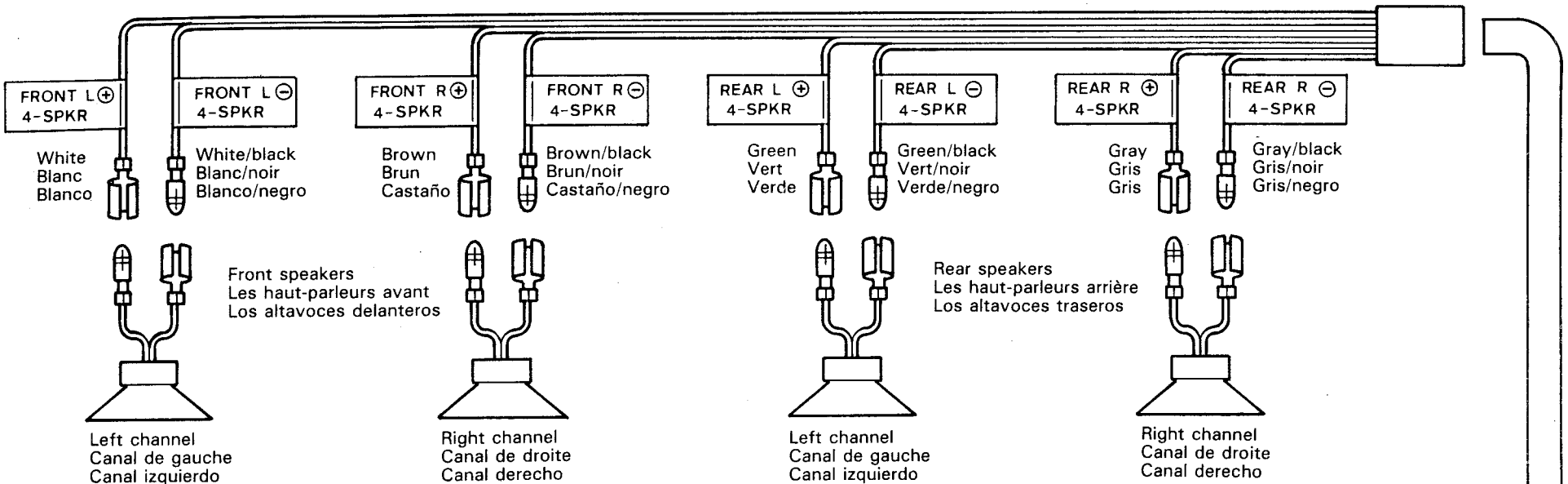
Panel information (Turn to page 10 for details.)
Indications sur le panneau (Se reporter à la page 22 pour de plus amples détails.)
Información del panel (Consultar la página 34 para más detalles.)



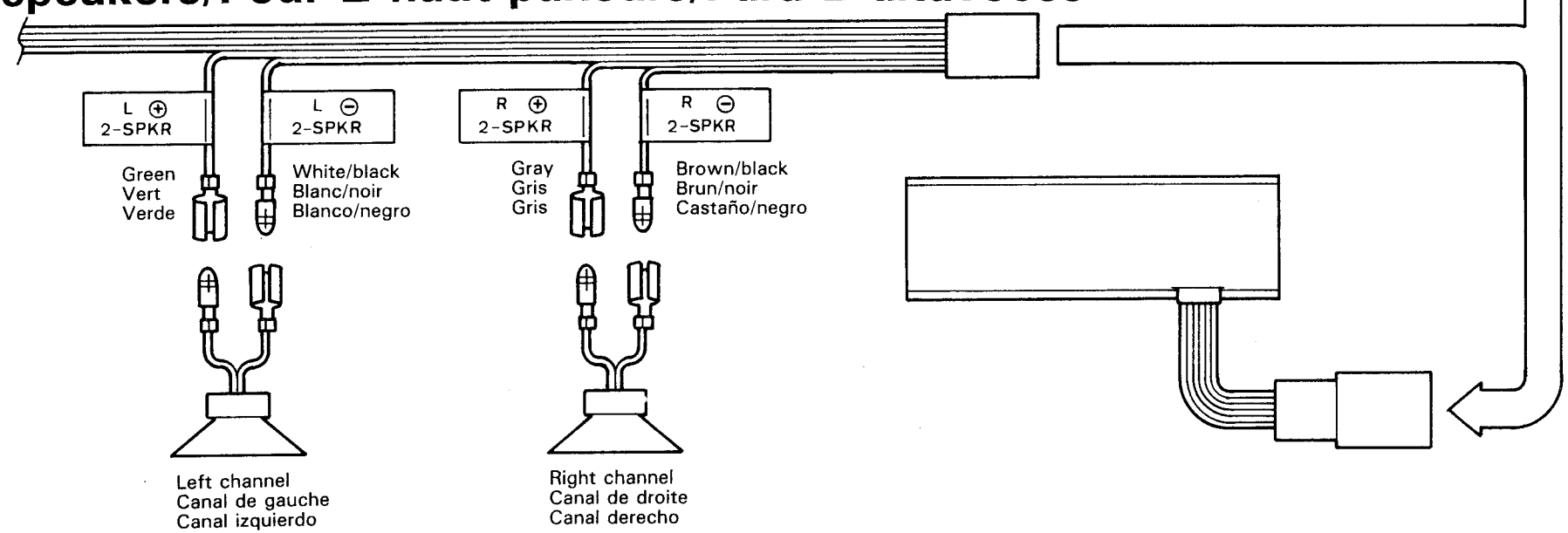
Connections/Connexions/Conexiones


Antenna cord (to vehicle's antenna)
Cordon d'antenne (à l'antenne du véhicule)
Cable de antena (a la antena del vehículo)
LINE IN/OUT
Power cord (red)
Cordon d'alimentation (rouge)
Cable de alimentación (rojo)
Short plug
Fiche de court-circuit
Clavija corta
PRE-OUT
POWER SUPPLY LEAD
+12V IGNITION
Graphic equalizer SG-7
Egaliseur graphique SG-7
Ecualizador graphico SG-7
Memory back-up power supply cord (yellow)
Cordon d'alimentation d'appoint pour la mémoire (jaune)
Cable de alimentación de refuerzo para la memoria (amarillo)
Dual-amp fader controller SK-C250
Contrôleur pour double ampli SK-C250
Controlador de balance de amplificador double SK-C250
MEMORY BACK-UP LEAD
+12V BATTERY
POWER ANTENNA LEAD
Power antenna cord (blue)
Cordon d'antenne motorisée (bleu)
Cable de la antena eléctrica (azul)
ILLUMI-NATION LEAD
LIGHT DIMMER
Light dimmer cord (violet)
Cordon de variateur de lumière (violet)
Cable del controlador de intensidad (violeta)
Ground cord (black)
Cordon de mise á la masse (noir)
Cable de toma de tierra (negro)
Power amplifier SM-100
Amplificateur de puissance SM-100
Amplificador de potencia SM-100
To speakers
Vers les haut-parleurs
A los altavoces

For 4 speakers/Pour 4 haut-parleurs/Para 4 altavoces



For 2 speakers/Pour 2 haut-parleurs/Para 2 altavoces



ENGLISH

Before Use

Precautions for Use

* This unit is designed for DC 12V negative ground vehicles only. Your dealer should be consulted if you intend to use it with a positive ground or DC 24V vehicle.
* The temperature inside a vehicle reaches a very high level in the summer when that vehicle is exposed to the sun for a long period of time. At times like this, ensure that the vehicle is ventilated in order to reduce the inside temperature before use.
  In winter warm up the inside of the vehicle after it has been parked for a long period of time before use.
* The unit does not take kindly to high temperatures, high levels of humidity and dust. Ensure, therefore, that the inside of the vehicle is cleaned and ventilated. Remove the dust from the unit form time to time so that the heat dissipation effect is not impaired.

For Safe Driving

Keep the volume at a level on which you can still hear sounds outside the vehicle while you are driving.

Accessory Parts

The following accessories are provided in addition to the unit. Check that they are all accounted for after unpacking.

- Housing case 1
- Holder 1
- Lever 2
- Rubber bushing 1
- Speaker cords 1
- Power cords 1
- Metal mounting strap 1
- Spring washer (for M5) 1
- Tapping screw (M5 × 20) 2
- Hex nut (for M5) 1
- Ground cord 1

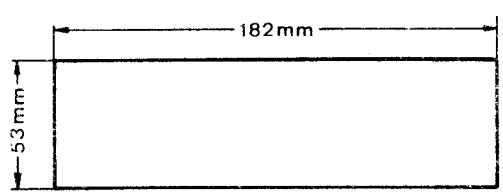
Mounting Procedure

Before mounting

Choose a position for mounting the unit inside the vehicle where the unit will not prove to be an obstacle to driving and where it will be safe and easy to operate.

Precautions for mounting

* Disconnect the (—) cable of the battery when mounting or connecting the unit in order to avoid shortcircuiting. Re-connect the cable to the battery's (—) side after the mounting and connection work and after having checked that there are no errors.
* Make sure that the screws supplied are used for the mounting work. Malfunctioning may occur if any other screws are used.
* Tighten up the mounting screws so that they will not be loosened by vibration.
* Avoid installing the unit in a location exposed to moisture or high temperatures from a heater or direct sunlight.
* The unit fits in the space provided for a radio in your dashboard. If the existing space is too small, enlarge as shown in illustration.



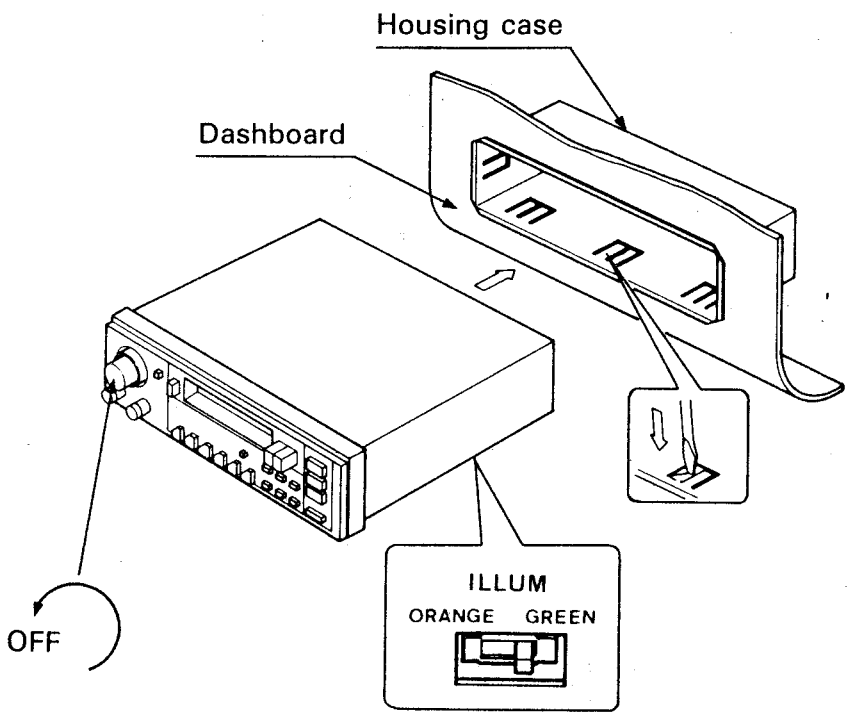
* Consult your dealer if the mounting work presents difficulties or if holes have to be made in the vehicle's body.

Illumination Switch

There is a choice of either green or orange for the illumination of the front panel. Selection is at the touch of a switch. Choose your favorite color, or the one that matches your dashboard light. The switch is located in an aperture in the base of the unit as shown in illustration.

1. Switch off the unit's power.
2. Set the switch to the desired position.

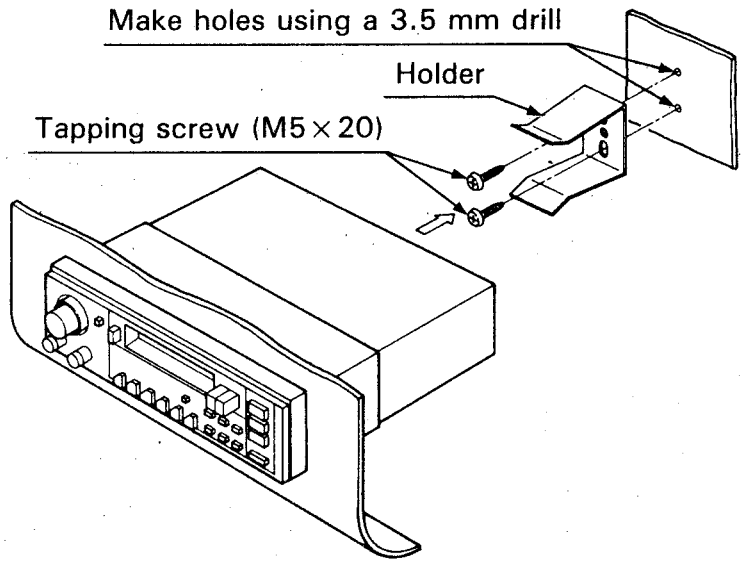
Mounting Procedure



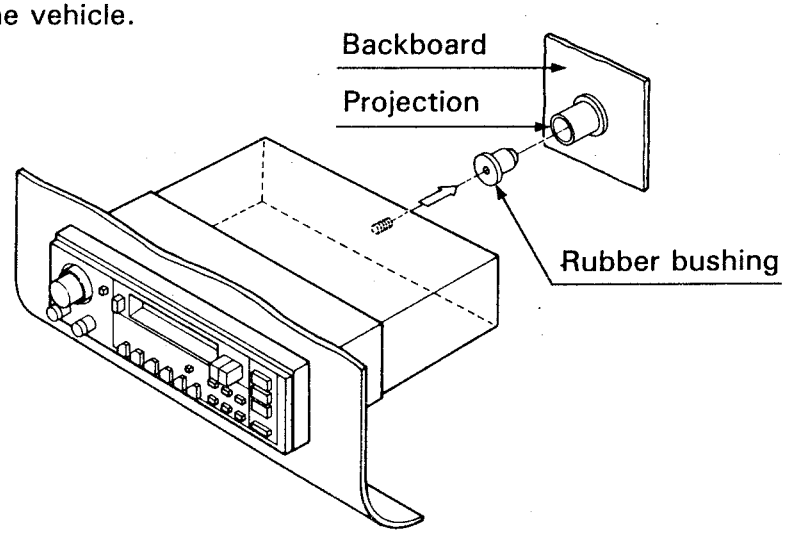
1. Fit the housing case into the space provided for a radio in your dashboard, and secure it by bending the flanges with a screwdriver. Fit the unit into the housing case and secure it using the flanges to the left and right of the unit.

Use one of the following methods to fasten the back of the unit.

1. Using a holder

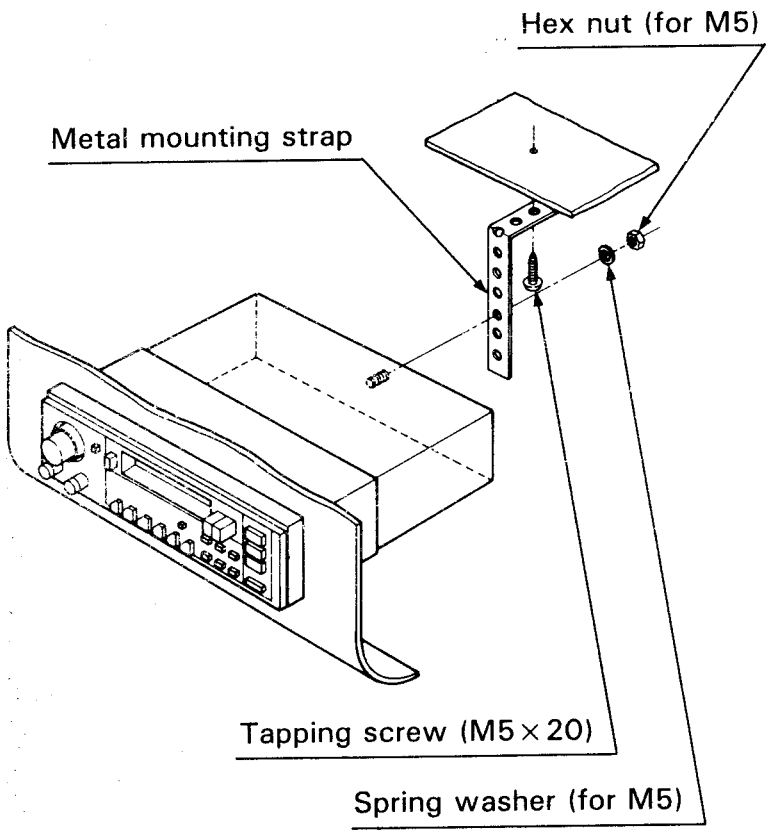


2. Using the projection on the vehicle
   Fit the rubber bushing provided over the screw projecting from the rear panel of the unit and use this to fasten the unit to the projection on the vehicle.

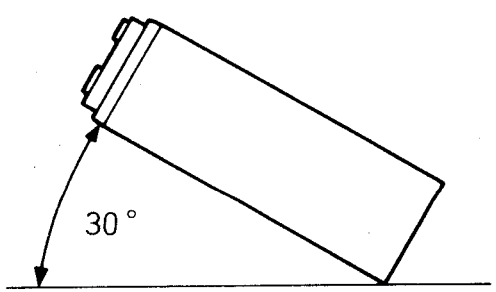


ENGLISH

3. Using the metal mounting strap

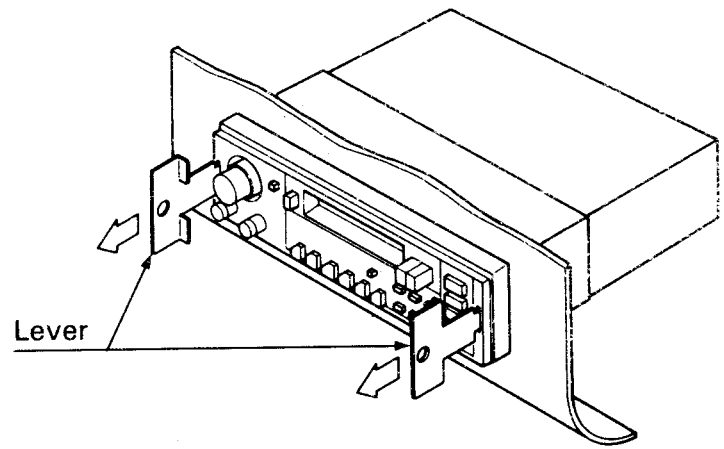


* **Mount the unit at an angle of less than 30° to the horizontal.**

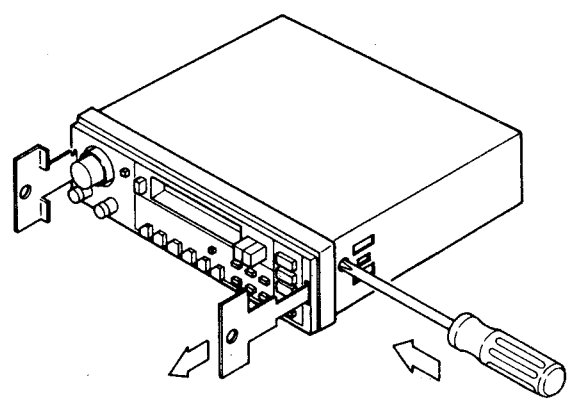


Removing the unit

1. If a strap is being used, release the strap.
2. Slide a lever into the slots on the right and left of the front panel and release the unit by pulling it towards you.
3. Release the wire connectors attached to the rear panel of the unit.



4. Depress the hooks on the side of the unit using a screw-driver and release the lever.



Connections

Connection Precautions

* Do not bring the connecting cords near parts whose temperature will rise when the vehicle is driven.
* Connect the connectors securely so that they are locked into position. Improper connection can result in noise and no operation.

Speaker Connections (Turn to page 5 for details)

Connect the appropriate speaker cords provided to the 6-pin connector cord on the unit. Either 2 or 4 speakers can be connected to the unit, and since the method differs in each case, reference should be made to illustration to ensure that each speaker is connected correctly.

Graphic Equalizer Connection (Turn to page 4 for details)

Remove the short plug from the LINE IN/OUT terminal on the rear panel of the unit and plug in the connector on the graphic equalizer.

* **Removal of the short plug when a graphic equalizer is not connected will result in loss of sound.**

Ground Connection

Connect the ground cord (black) to the terminal of the black cord leading from the fuse holder. Connect the Y-terminal to a metal part of the vehicle and secure it using the screw provided on the vehicle for this purpose.

Power Supply Connection

Connect the power cords to the 4-pin connector on the unit. Connect the power cord terminals in the following way:

POWER SUPPLY LEAD (Red): Connect the power supply cord to the rear 12V (+) passing through the ignition fuse post of the vehicle.

MEMORY BACK-UP LEAD (Yellow): So that the broadcast stations memorized in the unit are not erased, connect the memory back-up's power cord (yellow) to the power supply from which power is supplied all the time regardless of the ignition key ON/OFF, such as the clock power supply.

* **The unit will not function unless this cord is connected.**

ILLUMINATION LEAD/LIGHT DIMMER (Violet): Connect the illumination cord to the rear circuit passing through the lighting switch. When the lights are turned on the brightness of the front panel is automatically reduced by half to avoid over brightness.

POWER ANTENNA LEAD (Blue): When using the power antenna, join the end of the connector to the power antenna plug. Operation of the power antenna is controlled by the ON/OFF switch on the unit.

Power Amplifier Connections

The unit can be connected to one or two SANSUI's power amplifiers (SM-100) to provide high power sound reproduction for your greater listening pleasure.

Single power amplifier connection: Connect the line input on the power amplifier to the PRE-OUT connector on the unit.

Dual power amplifier connection: Connect the dual-amp fader controller (SK-C250) to the PRE-OUT connector on the unit and connect the two power amplifiers to the front and rear points provided on the power output connector.

CAUTION

1. **When connecting a pair of speaker do not ground Green/Black, Gray/Black, White and Brown wires.**
2. **When connecting 2 pair of speakers do not ground speaker wires directly to the body, do not connect same minus wires together as it may cause damage.**
3. **When installing CAR STEREO, be sure to fix the set with a MOUNTING STRAP.**

Panel information

*** Please read the following explanation while referring to the photographs on page 3.**

1 VOLUME/BAL (Balance) Control

The volume/balance control knob has the following 3 functions:

ON/OFF Switch: It controls the power supply to the unit and to the connected graphic equalizer. Turn the knob to the for right ON and fully to the left for OFF.

Volume control: When the unit is switched on, volume can be increased by turning the knob to the right and decreased by turning it to the left.

Balance control: To adjust the balance of volume between the left and right channels, depress this knob while turning it. Turn the knob to the left to increase the volume from the left channel and to the right to increase the volume from the right channel.
The click point (mechanical balance) is preset for normal listening.

2 FADER Control

When the unit is connected to 4 speakers, the fader control is used to adjust the balance of volume between the front and rear speakers. Turn the knob to the right to increase the volume from the front speakers and to the left to increase the volume from the rear speakers. The click point (mechanical balance) is preset for normal listening.

3 LOUD Switch (Loudness)

Set this switch to ON by pushing it when listening to sound at a low listening level. Our ears are such that the bass and treble seem to drop off when sound is low but by setting this switch to ON, both the bass and treble can be boosted to create a more balanced sound. The switch is set to OFF by pressing it again.

4 PRO (Program) Switch

Press this switch to reverse the direction of the tape being played back. When the tape comes to the end, the automatic program selelction function is activated to automatically reverse the direction of the tape. When the indicator is lit, the program switch indicates which side of the tape is being played. ► indicates Side A is being played and ◄ indicates Side B is being palyed.

5 Tape Loading Slot

This is where you load your tapes. Load the cassette tape with the side with the tape visible to the right. Once you insert the tape, it will automatically start playing.

6 ME (Memory) Switch

The memory switch is used when presetting a radio station. When this switch is depressed, the ME indicator will come light for 5 seconds. Duing this period, press the preset station switch once and the unit will memorize the radio station currently tuned.

7 DISP (Display) Switch

When you wish to know the time during a radio broadcast reception, depress this switch. The time will be indicated in hours and minutes for a period of 5 seconds. The display will then return to the frequency of the radio station to which the unit is currently tuned.

8 AM Band Switch

When the AM band switch is depressed, the AM indicator lights up and the radio may be tuned to stations broadcasting on the AM band.

9 FM Band Switch

When the FM switch is depressed, the FM indicator lights up and the radio may be tuned to stations broadcasting on the FM band. Each time the FM switch is depressed the FM indicators 1, 2, and 3 will light up in sequence.

10 EJECT/Fast Wind Switches

To retrieve a tape, depress the EJECT (<< and >>) switches simultaneously. The tape will be ejected and the unit will switch over to radio reception automatically. To wind a tape quickly (fast forward) depress the switch in the same direction as the PRO-indicator lamp, and to rewind it, press it in the opposite direction. The tape will playback at the beginning or the end automatically.

To stop the tape in the middle during either fast forward or rewind, lightly depress the alternative switch.

* **To maintain the pinch roller in optimum condition, always depress the EJECT switches and remove a tape from the unit when either the unit or the ignition is switched off.**

11 METAL Switch

The metal switch is used with metal tapes or high bias position tapes. When the switch is depressed, the indicator lights up. Leave the switch in the released position when playing normal tapes. When the switch is in the released position, the indicator will go out.

12 Dolby NR Switch (DD)

Push this switch to the ON position (indicator lights) when playing back tapes which have been recorded using the Dolby noise reduction system*. This will reduce the amount of high-frequency tape hiss inherent to tapes and enhance the sound quality.

Keep the switch at OFF (indicator is off) when playing back ordinary tapes which were not recorded using the Dolby system.

* Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.
* "Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

13 AMPS Switch

This automatic music program search function is used to automatically locate a program which is being played back and which you want to hear again from the start or another program which you want to hear. After this switch is pressed to the ON position (indicator lights), playback starts automatically from the following program when the tape is fast forwarded or from the start of the program being played back when the tape is rewound.

Remember to keep this switch at OFF (indicator is off) by pressing it again when you do not intend to use this function.

14 BASS Control

This is used to control the low-frequency (bass) sound characteristics. The bass control is flat at the center clickstop position. When the control is rotated clockwise, the bass is boosted and when rotated counterclockwise, it is attenuated.

15 TREBLE Control

This is used to control the high-frequency (treble] sound characteristics. The treble control is flat at the center clickstop position. When the control is rotated clockwise, the treble is boosted and when rotated counterclockwise, it is attenuated.

16 Display

The display panel registers the following information:

Reception frequency: The frequency of the station which has been tuned in is indicated in dights. MHz units are used for FM frequencies and kHz units for AM frequencies.

Time: The time will be displayed in hours and minutes during tape play back or when DISP switch is depressed while the radio is playing.

ST (Stereo) indicator: This indicator lights when an FM stereo station has been tuned in.

ME (Memory) indicator: When the ME (Memory) switch is depressed, the ME indicator will come alight for 5 seconds indicating that the memory function is in operation for presetting radio stations.

17 Preset Station Switches

The preset station swtich can be used to preset 1 AM and 3 FM stations. To change between the 3 FM stations, depress the FM band switch. The FM indicators 1, 2, and 3 will light up in sequence. To transferbetween FM and AM, simply depress either the FM or AM band switch. Once a station has been preset, merely press the switch to continue reception.

18 P. SCAN Switch

This switch consecutively scans the stations preset in (1)~(6) of the preset station switches.
When depressed, this switch recalls the stations previously preset in the preset station switches, each at an interval of 5 seconds, following the order (1)→(2)→(3)→ ... (6)→(1)→(2), allowing you to monitor the broadcast programs. If this switch is depressed again, the preset scanning function is released and stops at the station presently being monitored.

19 MONO Switch

When the MONO switch is depressed, an FM stereo broadcast will be received in mono. In addition, when depressed this switch permits manual tuning. Auto-tuning is possible when this switch is released.

20 LOC (Local) Switch

Sound is often distorted when an FM station is picked up near the broadcasting station itself or in other areas where radio signals are strong. To improve reception and quality of sound, depress the LOC switch. Under normal conditions, keep this switch in the released position.

* This switch is not effective for improving the quality of AM reception.

21 TUNE/SEEK Switches

Use these switches when selecting stations on either FM or AM broadcasts.
Both auto-tuning and manual tuning are possible with the MONO switch.
To select stations broadcasting on higher frequencies, depress the right-hand switch (►), and for stations broadcasting on lower frequencies, depress the lefthand switch (◄).

Auto-tuning: When the (◄) switch is depressed, frequency countdown commences. Tuning stops automatically once a station is tuned in. When the lower frequency limit is reached, countdown will begin again from the upper frequency limit.

Manual Tuning: Every time one of the TUNE switches is depressed, the received frequency moves up or down in 50 kHz or 100 kHz (depending on the sales area) for FM and in 9 kHz or 10 kHz (depending on the position of the AM CHANNEL selector switch) for AM. When the switches are kept in the depressed position, the received frequency moves up or down rapidly in the units until you release the switches.

* To synchronize time, press the lefthand side of this switch (H) for hours and the righthand side (M) for minutes.

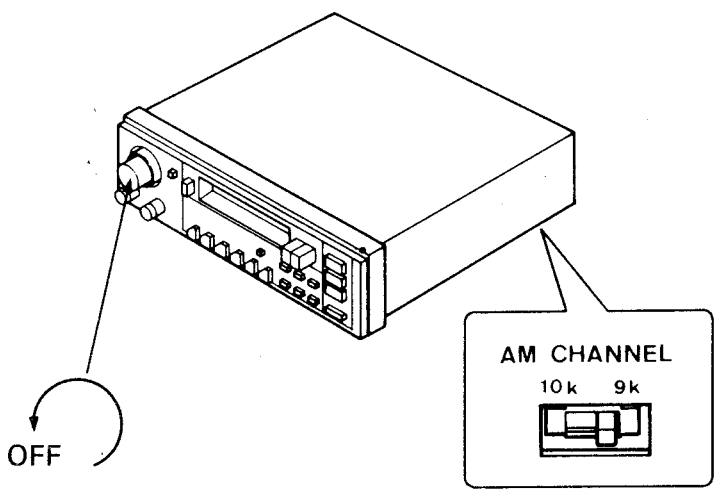
AM CHANNEL selector switch

AM programs are broadcast under channel spacing which, depending on the broadcasting area in the world, are characterized by different channels (frequency intervals) between broadcasting stations. In North, Central and South America, this channel is 10 kHz whereas in the rest of the world, it is 9 kHz.

Your unit is a synthesizer tuner which varies the reception frequency at each 9 kHz or 10 kHz channel (frequency interval) during reception. If you use your unit in an area with a different channel plan, you may not be able to receive AM stations. The unit you have purchased has been adjusted to the channel in your area. It is therefore necessary to change over the channel setting if you move to an area with a different channel spacing.

Set the AM CHANNEL selector switch on the unit's base in the following sequence.

1. Switch off the unit's power.
2. Set the switch to the proper position.



NOTE: Depending on the sales area, your unit may, or may not, be provided with an AM channel selector switch.

Synchronizing time

1. Depress the MONO switch.
2. When using the radio, depress the DISP switch for time display.
3. While the time display is still lit, depress the ME switch. Continue to depress this switch until time synchronization has been achieved.
4. Depress the lefthand side of the TUNE/SEEK switches (H) to synchronize hours. When the switch is depressed once, the time display will move for- ward 1 hour. When the switch is continuously depressed, the display will move forward rapidly through the hours 1-12.
5. Depress the righthand side of the TUNE/SEEK switches (M) to synchronize minutes. When the switch is depressed continuously, the display will show a rapid progression from 00-59 minutes. When you get near your desired time, depress the switch once to progress minute by minute until accurate synchronization is achieved.
   EG. To synchronize the time display with the 11:00 time signal, set the time display to 11:59 wait for the time signal. When the time signal is broadcast, immediately press the righthand switch (M) once to achieve the correct setting.

* The clock mechanism in the unit will continue to function by means of the memory back-up power source even when the unit or the ignition is switched off. However, the clock mechanism will cease to function if the unit is removed from the vehicle.

Broadcast reception

Basic Operation

1. Turn the unit on by means of the volume control, and adjust it to obtain the desired volume.
2. Depress the FM or AM band switch to obtain your desired broadcasting band.
3. Depress the TUNE/SEEK switches to tune in to your desired radio station. Depress the righthand side of the switch for higher frequencies and the lefthand side for lower frequencies.

Auto-tuning: Set the MONO switch in the released position. Depress the TUNE/SEEK switches to commence auto-tuning. Tuning stops automatically once a station is tuned in. Depress the switch again to continue auto-tuning to locate your desired station.

Manual tuning: Depress the MONO switch. Keep the TUNE/SEEK switches continuously depressed until the frequency display indicates you are near your desired station. Then fine tune by alternatively depressing and releasing the TUNE/SEEK switches.

4. Use the VOLUME, BAL (balance,) FADER, BASS, and TREBLE controls to adjust the quality and volume of sound to suit your taste.

* The radio will not function if a cassette tape is in the tape deck.

* When the LOC switch is depressed, it may not be possible to receive FM broadcasts from stations where radio signals are weak. It should only be used to eradicate interference when radio signals are too strong.

* It may not be possible to perform an auto tuning operation with stations whose signals are too weak. In cases like this, tune in the station manually.

Presetting Stations

You can recall stations whose programs you listen to frequently with a push of a switch if you preset the frequencies of the stations beforehand in the preset station switches.

1. Tune in the station which is to be preset following steps 1 ~ 3 in the basic operation.
2. A total of 18 FM station can be preset with each of the 3 FM indicators capable of handling 6 stations. Depress the FM band switch to set the present number for your selected stations.
3. When one of the preset staion switches is pushed within about 5 seconds after the ME switch has been pushed, the station will be memorized in that position. This completes the presetting operation.

* When another station is preset into a position which has already memorized a station, the previously memorized station is erased.

* This unit features a last station memory function which stores the station which was heard before the power was switched off. This function serves to automatically recall the same station when the power is switched on again.

Preset scan switch

If the P. SCAN (preset scan) switch is depressed while the radio is in use, the preset station indicator will light up from 1-6 in sequence. Each numbered indicator from 1-6 will stay alight for 5 seconds, during which period you will be able to listen to the preset stations indicated. To select the station of your choice, either depress the P. SCAN switch again, or cancel the scan function by depressing the appropriate preset station switch. The radio will then continue to receive your desired station.

* The FM band switch is used to change between FM indicators 1, 2, and 3.

CAUTION

The unit's memory back-up power cord should be connected to a power supply which supplies power all the time so that the preset stations are not erased even after the unit's power is switched off. When the battery is removed or the power is otherwise switched off, the memory contents will be held for several days but after this period of time the preset stations will be erased. The last staion memory function will not work, either.

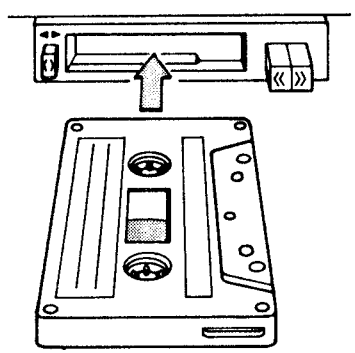
Tape playback

1. Turn the unit on by means of the volume control, and adjust it to obtain the desired volume.
2. Set the METAL switch and Dolby NR switch to the appropriate position.
3. Insert the cassette tape into the tape insertion slot. The PRO indicator lights as soon as the tape is loaded and the tape is automatically played back.
4. Use the VOLUME, BAL (balance,) FADER, BASS, and TREBLE controls to adjust the quality and volume of sound to suit your taste.
5. When one side of the tape has been played back and the tape comes to the end, the tape travel direction is automatically switched and the reverse side of the tape is played back.
   To change the tape travel direction during playback, press the PRO switch.
6. To stop a tape playing to remove it from the tape deck, press the EJECT (<< and >>) switches. When you remove a tape from the tape deck, the unit will switch over to radio reception automatically.

* **To maintain the pinch roller in optimum condition, always depress the EJECT switches and remove a tape from the unit when either the unit or the ignition is switched off.**

Loading the cassette tape

* **Any tape slack should be taken up before loading.**



Automatic Music Program Search (AMPS) Function

This function is used to automatically locate the beginning of program which is being played and which you want to listen to again from the start or another program which you want to hear.

1. Press the AMPS switch to the ON position (indicator lights).
2. When the " << or >> " switch is pressed, the automatic music program search function is activated and playback begins automatically from the start of the program. To listen to the same program being played back from the start, press the switch with the opposite direction mark to that of the PRO indicator; to skip the present program and listen to the following program, press the switch with the same direction mark.

- When you do not intend to use the AMPS function, press the AMPS switch again to set it to the OFF position (indicator goes off).
- The AMPS function may not function with the following types of recorded tapes:

* Tapes with unrecorded blanks between programs of less than 4 seconds in length.
* Tapes with long pianissimo sections of music.
* Tapes of conversations, etc. where there are breaks between the voices.
* Tapes on which humming or noise has been recorded between the programs.

Precautions for tape handling

* The cassette shell and tape may be deformed if left in a location whose temperature is high or which is exposed to direct sunlight.
  Tapes which are not being used should be housed in their cassette cases and stored in low-temperature location.
* Any tape slack should be taken up before use. Loading a slack tape can result in the tape being jammed around the capstan or pinch roller which can make it unusable.

Maintenance and Precautions

FM car antenna

When tuning in FM stations while the vehicle is moving, the vehicle will pass through varying signal conditions ranging from strong signals near broadcast stations to extremely weak signals. If an FM antenna is not used, the seinsitivity may be reduced and noise may increase as the signal conditions keep changing. For FM reception with a good sound quality and minimal noise, it is recommended that you attach a special FM car antenna.

When noise is heard

Reception may be impaired by ignition noise or alternator noise which is inherent to vehicles. In cases like this, it is recommended that you mount, depending on the type of noise, a noise filter (SK-N10 or SK-N20) made by SANSUI. Consult your dealer if you do not know the cause of the noise and find it difficult to remedy the problem.

Cleaning the head

When the unit has been used for a long time, deposits of magnetic dust and dirt build up on the surface of the head which makes the sound unstable, produces noise and impairs the sound quality. When your unit has been working for a long time, obtain a cleaning tape from your audio dealer to clean the head.

* When using a cleaning tape, read through the accompanying instructions and for cleaning the head once, simply run the tape through once. Running the tape through over and over again accelerates head wear.

Maintaining the unit

Wipe the unit's front panel from time to time using a soft cloth. Do not use hard cloths, thinners, alcohol or other volatile liquids for cleaning since they may scratch and mark the surface and erase the markings.

Before calling in the serviceman

Many symptoms presumed to be indications of trouble or malfunctions are, in fact, simply due to improper operation or to trouble in other units. Read through the instructions in this manual again and check the connections and operation.

Protection circuits

The protection circuits inside the unit function in the following circumstances.

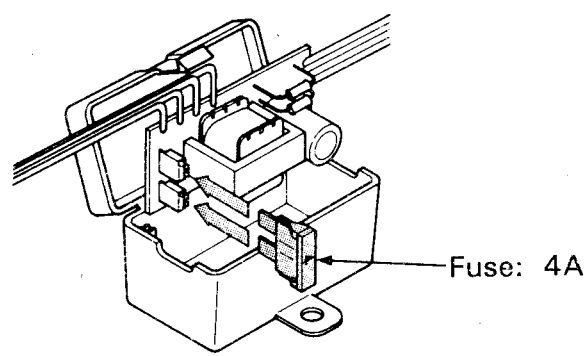
* When the speaker terminals have been shorted.
* When the covering of the speaker cords has been worn away or cut and the wires inside are touching the vehicle body.
* When the (—) speaker cords have been connected to both the left and right channels.
* When the inside temperature has risen due to some cause or other.
* When an overcurrent has flowed and the supply voltage has increased to an abnormal level.

If the protection circuits function during operation, find out what is wrong before continuing operation. No sound is heard through the speakers while these circuits are functioning.

Replacing the fuse

If the fuse has blown, replace with a fresh unit having the same amperage. If the new fuse blows as soon as it is inserted, there may be something wrong with the unit. In cases like this, contact your dealer.

* When opening the fuse holder, always make sure that the ignition is switched off.



Specifications

Audio section

Power output
15 watts per channel into 4 ohms (with no more than 1.0% total harmonic distortion)

Maximum output power ..... 20 watts per channel into 4 ohms (10% total harmonic distortion)
Load impedance ..... 4 ohms
Total harmonic distortion ..... less than 0.05% at 5 watts
Circuit system ..... OCL-BTL system
Input sensitivity and impedance (1 kHz)
LINE IN ..... 75 mV/47 kohms
Output voltage and impedance
LINE-OUT ..... 150 mV/2.2 kohms
PRE-OUT ..... 150mV/10 kohms
Signal to noise ratio (A network) ..... 75 dB
Frequency response ..... 30 Hz to 40,000 Hz±3 dB
Controls
BASS ..... ±10 dB at 100 Hz
TREBLE ..... ±10 dB at 10 kHz
LOUDNESS ..... +8 dB at 100 Hz
+6 dB at 10 kHz
(VOLUME: −30 dB)

FM section

Tuning range ..... 88 to 107.9 MHz
Usable sensitivity
Mono IHF ..... 14.8 dBf (1.5μV/75 ohms)
50 dB quieting sensitivity
Stereo ..... 18.4 dBf
Signal to noise ratio (at 65 dBf)
Stereo ..... 65 dB
Stereo separation ..... 35 dB at 1 kHz

AM section

Tuning range ..... 530 to 1,600 kHz
Usable sensitivity ..... 30 μV/75 ohms at 1,000 kHz
Signal to noise ratio ..... 45 dB
Image response ratio ..... 50 dB at 1,000 kHz

Tape section

Track format ..... 4-track/2-channel system
Tape speed ..... 4,8 cm/sec.
Tape transport system ..... Auto reverse playback
Play back head ..... Hard permalloy, 4-track
Wow/flutter ..... 0.08% max. (WRMS)
Frequency response
Normal (LH) tape ..... 30 to 14,000 Hz±3 dB
Chrome tape ..... 30 to 15,000 Hz±3 dB
Metal tape ..... 30 to 16,000 Hz±3 dB
Signal-to-noise ratio (with metal tape)
DOLBY NR OFF ..... Better than 52 dB
DOLBY NR ON ..... Better than 62 dB (above 5 kHz)
Power requirements ..... DC 12.0V
(Usable: 10,8~15.6V)
Rated: 14.4V
negative ground
Current consumption ..... 3.8A Maximum
Dimensions (chassis size) ..... 179 mm (7-1/16″) W
50 mm (2″) H
150 mm (5-15/16″) D
Weight ..... 1.55 kg (3.4 lbs) net

* **Design and specifications subject to changes without notice for improvements.**
* **In order to simplify the explanation illustrations may sometimes differ from the originals.**